

CUSTOMER NO.: 24498
Serial No. 10/556,834
Date of Office Action: 02/20/09
Response dated: 05/20/09

PATENT
PU030152

REMARKS/ARGUMENTS

Claims 1-23 and 25-27 now remain in this application following applicants' cancellation of claim 24, which duplicates the features of claim 1. Applicants have amended claims 26 and 27 to better point out and claim their invention.

Applicants gratefully acknowledge the Examiner's withdrawal of the previous rejections under 35 U.S.C. 103(a). Applicants also gratefully appreciate the Examiner's willingness to allow applicants' apparatus claims 18-22.

Applicants have carefully considered the newly entered rejections and request reconsideration thereof in view of the following Remarks.

35 U.S.C. 112 Rejection of Claims 26 and 27

Claims 26 and 27 stand rejected under 35 U.S.C. 112 as indefinite for failing to point out and claim the subject matter which applicants' regard as their invention. In particular, the Examiner contends that the terms "out of band" and "in band", as used in claims 26 and 27, respectively are unclear.

Applicants respectfully take issue with the Examiner's rejection. The terms "out of band" and "in band" have well known meanings in the field of communications. For example, the Wikipedia, the free on-line encyclopedia, defines the term "out of band" as follows:

Out-of-band (OOB) is a technical term with different uses in communications and telecommunication. It refers to communications, which occur outside of a previously established communications method or channel.

<http://en.wikipedia.org/wiki/Out-of-band>

By the same token, Wikipedia defines in band signaling as:

In telecommunications, **in-band signaling** is the sending of metadata and control information in the same band, on the same channel, as used for data.

http://en.wikipedia.org/wiki/In-band_signaling

Thus, based on such well-known definitions for out of band signaling and in band signaling, a skilled artisan would understand that claim 26, as now amended recites an encoder for transmitting film grain information on a different channel as the image information. In contrast, claim 27, as amended, recites an encoder for transmitting film grain information on the same channel as the image information. Amended, claims 26 and 27 distinctly point out and claim applicants' invention and fully comply with 35 U.S.C. 112.

35 U.S.C. §101

Claims 1-17 and 23-27 stand rejected under 35 U.S.C. §101 as not reciting statutory subject matter. Applicants respectfully traverse this rejection.

As announced by the Court of Appeals for the Federal Circuit in the recently decided case, *In Re Bilski*, 545 F. 3d 943, 953 (Fed Cir. 2008), the appropriate test for determining compliance with 35 U.S.C. §101 is the “machine or transformation” test, as elucidated by the U.S. Supreme Court in *Benson*, 409 U.S. 70. In particular, to be eligible for a patent under 35 U.S.C. §101, a process must be tied to a particular machine or transform a particular article to a different state or thing.

Applicants maintain that claims 1-17 and 23-25 clearly satisfy the “transformation” prong of the machine or transformation test as set forth in *Bilsky*. With regard to claims 1-17, applicants transform an image lacking film grain into an image containing film grain. The Examiner should appreciate that an image which film grain lacks film grain clearly constitutes a different article than an image having added film grain. In this regard, adding film grain to an image transforms the image. A video image with film attenuated or deleted film grain will look flat as contrasted to a video having film grain added thereto, causing the video image to appear more like motion picture film.

Applicants' claims 1-17 recite a method that transforms an article, e.g., an image lacking film grain, into different thing, namely an image containing film grain. Therefore, applicants' claims 1-17 satisfy the “transformation” prong of *Bilski* and constitute statutory subject matter. Applicants respectfully request withdrawal of the 35 U.S.C. §101 rejection of claims 1-17.

Claims 23-25 also satisfy the “transformation” prong of *Bilski*. Claim 23, from which claims 24 and 25 depend, recites a method for simulating film grain, which includes the step of

receiving at least one film grain parameter, and then simulating film grain in accordance with that parameter. In claim 23, a transformation occurs from the receipt of the film grain parameter to the simulation of film grain in accordance with that parameter. In other words, applicants' method of claims 23-25 transforms a film grain parameter into film grain, a different "thing" than the parameter itself. Since applicants' claims 23-25 transform an article into a different state or thing, the claims comply with 35 U.S.C. §101.

Claims 26 and 27 now recite an encoder that transmits image information and film grain information out of band and in band, respectively. These claims recite a machine, and therefore satisfy the "machine" prong of *Bilski*. As amended, claims 26 and 27 comply with 35 U.S.C. §101.

35 U.S.C. 102(b) Rejection of Claims 23 and 26-27

Claims 23 and 26-27 stand rejected under 35 U.S.C. 102(b), as anticipated by EP062000, corresponding to WO93/14591, in the name of Robert Farber. Applicants respectfully traverse the rejection.

The Farber reference concerns a technique for adding film grain to video image produced by a progressive scan video camera (110). The analog video image produced by the camera (110) undergoes conversion into a digital signal by an A/D converter (116). A summing amplifier (122) sums the digitized video signal with white noise generated by a grain simulator to produce a video signal having simulated film grain.

Applicants' claim 23 recites among other steps the step of simulating film grain in accordance with at least one parameter specifying a film grain attribute. Notwithstanding the Examiner's assertion to the contrary, the Farber reference does not teach this feature of claim 23. As depicted in FIG. 1 and described at page 13 lines 20-32 of WO 93/14591, Farber simulates grain by means of clipped random white noise. By clipping the positive swing of the random white noise, Farber creates random amplitude negative-going spikes, which when summed with the real time video signal, creates the appearance of random dark spots. This grain pattern appears constant for two or three fields of video corresponding to a single frame.

The process by which Farber simulates grain does not rely on any parameters whatsoever. Rather, Farber's film grain simulation technique depends only on random white noise. Therefore, since Farber does not simulate film grain based on a film grain parameter,

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applicants' claim 23 patentably distinguishes over this reference. Applicants request withdrawal of the 35 U.S.C. 102(b) rejection of claim 23.

Amended claims 26 and 27 now recite an encoder for transmitting image information and film grain information out of band and in band, respectively. The Faber reference does not disclose any encoder whatsoever, let alone an encoder that transmits image information and film grain information out of band and in band, respectively. Applicants request withdrawal of the 35 U.S.C. 102(b) rejection of claims 26 and 27.

Conclusion

In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

No fees are believed due with regard to this Amendment. However, if there is a fee, please charge the fee and/or credit any overpayment to Deposit Account No. **07-0832**.

Respectfully submitted,

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